

Claims

- 1) Sofa bed comprising an almost parallelepiped frame structure; a number of movable frames, bound together, that move according to roto-translating motions from the close to open position, wherein in the closing position said frames are sequentially folded up, while in the open position, are consecutively aligned; and a mechanism that moves said frames, characterized in that it comprises at least one lever, hinged to the joint between the frame (2), said headrest, and the adjacent frame (3).
- 2) Mechanism for sofa bed and similar products, comprising a number of articulated quadrilaterals and synchronization tools and characterised by the fact that at least one lever has an end hinged to the joint (2') between the frame (2), said headrest, and the adjacent frame (3); while the other lever end is directly hinged to the fixed structure or to any element fastened to said fixed structure.
- 3) Mechanism according to claim 2 characterized by the fact that said mechanism comprises quadrilateral (16), quadrilateral (12) and quadrilateral (17).
- 4) Mechanism according to claims 2 or 3, characterized by the fact that a first retain elastic mean is interposed between the lever (6) and the lever (1), while between the lever (1) and the fixed structure (7) is interposed a second retain elastic mean.

- 5) Mechanism according to claim 4, characterized by the fact that said elastic means can also be positioned on the elements bound to elements (6), (2) and (7).
- 6) Mechanism according to at least one of the claims from 3 to 5, characterized by the fact that said quadrilateral (12) determines the position of the headrest (2) in the bed configuration, being the headrest in vertical position in the sofa configuration.
- 7) Mechanism according to claim 2, characterized by the fact that the lifting can be obtained by means of two simple quadrilaterals; said quadrilaterals have one end hinged at the fixed structure (7), the other end at the frame (2) and are joined each other by means of a lever, which makes synchronous their motion.
- 8) Mechanism according to at least one of the claims from 3 to 7, characterized by the fact that said quadrilateral (16) moves synchronically the rest of the mechanism.
- 9) Mechanism according to claim 8, characterized by the fact that said quadrilateral (16) comprises a 5-hole lever (6), hinged to the levers (8) and (9), having roto-translative motion.
- 10) Mechanism according to claim 8, characterized by the fact that said quadrilateral (16) comprises a 4-hole lever (6), directly hinged to the fixed structure (7), with rotatory motion around a point fixed with respect to the fixed

structure (7).

- 11) Mechanism according to at least one of the claims from 3 to 10, characterized by the fact that said mechanism performs a particular path, which raises the mechanism to a height above the ground that makes the mechanism manageable.
- 12) Mechanism according to at least one of the claims from 3 to 11, characterized by the fact that said quadrilateral (17) moves the sliding system of the seat cushions (21).
- 13) Mechanism according to the claim 12, characterized by the fact that said quadrilateral (17) moves the seat cushion (21) by means of only two additional elements (4) and (5).
- 14) Mechanism according to claim 13, characterized by the fact that said lever (4) has at least three holes, one of them hinges a frame, upon which the seat cushions (21) are placed.

AMENDED CLAIMS

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original claims 1-14 replaced by new claims 1-13 (3 pages)]

Claims

- 1) Mechanism for sofa bed and similar products, comprising a number of articulated quadrilaterals and synchronization tools, with at least one lever having an end hinged to the joint (2') between the frame (2), the headrest, and the adjacent frame (3); and characterized by the fact that said mechanism comprises a quadrilateral (16), a quadrilateral (12) and a quadrilateral (17).
- 2) Mechanism according to claims 1, characterized by the fact that a first retain elastic mean is interposed between the lever (6) and the lever (1), while between the lever (1) and the fixed structure (7) is interposed a second retain elastic mean.
- 3) Mechanism according to claim 2, characterized by the fact that said elastic means can also be positioned on the elements bound to elements (6), (2) and (7).
- 4) Mechanism according to at least one of the claims from 1 to 3, characterized by the fact that said quadrilateral (12) determines the position of the headrest (2) in the bed configuration, being the headrest in vertical position in the sofa configuration.
- 5) Mechanism according to claim 1, characterized by the fact that the lifting can be obtained by means of two simple quadrilaterals; said quadrilaterals have one end hinged at the fixed structure (7), the other end at the frame (2) and are joined each other by means of a lever, which makes synchronous their motion.

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- 6) Mechanism according to at least one of the claims from 1 to 5, characterized by the fact that said quadrilateral (16) moves synchronically the rest of the mechanism.
- 7) Mechanism according to claim 6, characterized by the fact that said quadrilateral (16) comprises a 5-hole lever (6), hinged to the levers (8) and (9), having roto-translative motion.
- 8) Mechanism according to claim 6, characterized by the fact that said quadrilateral (16) comprises a 4-hole lever (6), directly hinged to the fixed structure (7), with rotatory motion around a point fixed with respect to the fixed structure (7).
- 9) Mechanism according to at least one of the claims from 1 to 8, characterized by the fact that said mechanism performs a particular path, which raises the mechanism to a height above the ground that makes the mechanism manageable.
- 10) Mechanism according to at least one of the claims from 1 to 9, characterized by the fact that said quadrilateral (17) moves the sliding system of the seat cushions (21).
- 11) Mechanism according to the claim 10, characterized by the fact that said quadrilateral (17) moves the seat cushion (21) by means of only two additional elements (4) and (5).
- 12) Mechanism according to claim 11, characterized by the fact that said lever (4) has at least three holes, one of them hinges a frame, upon which the seat cushions (21) are placed.
- 13) Sofa bed comprising an almost parallelepiped frame structure; a number of movable frames, bound together, that move according to roto-translating motions from the close to

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open position, wherein in the closing position said frames are sequentially folded up, while in the open position, are consecutively aligned, characterized in that it uses a mechanism according to at least one of the previous claims.

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